Notice of Allowability	Application No.	Applicant(s)	
	09/893,491	WAKABAYASHI ET AL.	
	Examiner	Art Unit	
	Dwin M. Craig	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the after final amendment filed on 12-06-05*.

2. ☒ The allowed claim(s) is/are *1-14*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

And

EXAMINER'S AMENDMENT

1. Claims 1-14 are allowed.

2. As regards the reasons for allowance, please see the Final Office Action dated 9-6-2005.

EXAMINER'S AMENDMENT

3. Please enter the After Final Amendment of 12/6/05 prior to entering this Examiner's amendment.

3.1 An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ken Moore Registration Number 56,272 on 1-31-2006.

The application has been amended as follows:

3.2 Claim 3 has been changed to the following, -- The computer implemented method according to claim 1, wherein said element extracting includes defining, for element extraction, straight lines between the vertexes of said divided polygon and a surface containing some of the vertexes and parallel with any surfaces of said voxels. --.

3.3 Claim 4 has been changed to the following, -- The computer implemented method according to claim 1, wherein said element extracting comprises setting a bottom surface and a top surface corresponding to the bottom surface in said divided polygon,

allotting the vertexes of said divided polygon to the set top surface side and the set bottom surface side,

identifying correspondences between the vertexes on the top and bottom surface sides which have been allotted, and

extracting an element of a predetermined shape from the divided polygon using the top and bottom surface sides identified as correspondences. --.

3.4 Claim 5 has been changed to the following, -- A computer implemented method for creating an analysis model data using an arithmetic device, comprising:

reading out shape data defining a surface shape of an analysis target;

generating voxel data in which the read-out shape data are embraced by a set of voxels that are rectangular parallelepipeds; and

creating, for each voxel interfering with the shape data, an interference polygon inside the shape data using interference surfaces between the shape data and the interior of the voxel;

after said creating of the interference polygon moving vertexes of the interference polygon which are not located on any side of said voxel, to an on-side intersection that is an intersection between said interference surface and a side of said voxel, and creating a divided polygon having, as vertexes, the on-side intersection and vertexes of the voxel inside said shape data; and

extracting an element of a predetermined shape using a plurality of vertexes of the divided polygon and a voxel surface inside said shape data or a plane which is perpendicular to an internal voxel surface, or a partial area of the voxel surface, and which contains said plurality of vertexes of the divided polygon. --.

3.5 Claim 9 has been changed to the following, -- The computer implemented method according to claim 5, wherein said creating of the divided polygon includes contracting the on-side intersection to a vertex of the voxel if a distance from said on-side intersection to said voxel vertex is shorter than a predetermined contraction distance. --.

3.6 Claim 13 has been changed to the following, -- A computer program product embodied on a computer-readable medium and comprising code that, when executed, causes a computer to perform:

reading out shape data defining a surface shape of an analysis target;

generating voxel data in which the shape data read out are embraced by a set of voxels that are rectangular parallelepipeds;

creating, for each voxel interfering with the shape data, an interference polygon inside the shape data using interference surfaces between the shape data and the interior of the voxel;

moving a vertex of the interference polygon which is not located on any side of said voxel, to an on-side intersection that is an intersection between said interference surface and a side of said voxel;

creating a divided polygon having, as vertexes, the on-side intersection and vertexes of the voxel inside said shape data; and

extracting an element of a predetermined shape using a plurality of vertexes of the divided polygon and a voxel surface inside said shape data or a plane which is perpendicular to an internal voxel surface, or a partial area of the voxel surface, and which contains said plurality of vertexes of the divided polygon. --.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC

Paul L. Rodriguez 2/6/06
Primary Examiner
Art Unit 2125